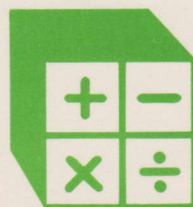


no. A-151



# mastering math worksheet generator

teaching utility program  
for the **apple® II** computer



for use with the series  
**mastering math**

no. A-151



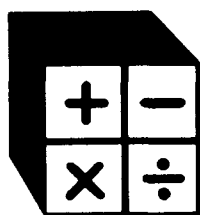
teaching utility program  
for the **apple® II** computer

for use with the series  
**mastering math**



# mastering math worksheet generator

teaching utility program  
for the **apple® II** computer



for use with the series  
**mastering math**

This manual is compatible  
with  
the Mastering Math Worksheet Generator diskette  
Version 1.x

© Minnesota Educational Computing Corporation  
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## INTRODUCTION

The Mastering Math series consists of a sequenced series of 38 drill and practice lessons covering first through fourth grade basic math skills. These lessons are contained on seven diskettes. In addition, three utility diskettes provide management, diagnostic, and worksheet generation capabilities for the series.

This package, the Mastering Math Worksheet Generator, provides teachers with a convenient method of producing worksheets to supplement lessons in the Mastering Math series. The worksheets can be based on selected objectives or on a particular program.

### MECC MASTERING MATH SERIES

Package Title	Grade Level	Operation	Types of Problems
1. Early Addition (No. A-788)	1-2	+	Addition facts and missing addends
2. Circus Math (No. A-109)	2-3	+	Addition problems with <u>no</u> regrouping
3. Addition Logician (No. A-125)	3	+	Addition problems with regrouping
4. Space Subtraction (No. A-145)	1-3	-	Subtraction facts and problems with <u>no</u> regrouping
5. Subtraction Puzzles (No. A-146)	3	-	Subtraction problems with regrouping
6. Multiplication Puzzles (No. A-147)	3-4	x	Multiplication facts, missing factors, <u>no</u> regrouping, and regrouping
7. Quotient Quest (No. A-148)	4	÷	Division facts, <u>no</u> remainders, and remainders

## **INTRODUCTION (continued)**

### **MECC MASTERING MATH SERIES (continued)**

Utility Package Title	Features
8. Mastering Math Diagnostic System (No. A-149)	Tests the student and suggests initial entry point into the series
9. Mastering Math Management System (No. A-150)	Allows the teacher to set lesson presentation parameters such as mastery level, number of allowable tries, and type(s) of operation
10. Mastering Math Worksheet Generator (No. A-151)	Produces printed worksheets for math objectives selected by the teacher

Features of the Worksheet Generator include:

- problem types can be generated according to objective numbers or program names;
- worksheets can contain up to forty problems;
- worksheets can be given titles;
- problems can be numbered or left unnumbered;
- worksheets can be personalized by adding student names;
- up to 24 copies of any worksheet can be printed with the copies identical or all different;
- the design format of worksheets and student name lists can be saved for future use.

## USE IN AN INSTRUCTIONAL SETTING

### Mastering Math Series Lesson Diskettes

The Mastering Math series contains seven lesson diskettes sequenced with objectives from first through fourth grade. You will probably not be using all of the diskettes from the series. However, the diskettes containing the objectives you wish to cover with your students need to be easily accessed. Students using the Management System will be directed to insert a particular lesson diskette and must therefore have it at hand.

Test results from the Diagnostic System will indicate a particular lesson as the student's starting point.

Using the Worksheet Generator, teachers can print worksheets to supplement particular lesson diskettes. Teachers might want students to use various lesson diskettes following completion of the sheets.

The seven lesson diskettes in the series are:

1. Early Addition (No. A-788)
2. Circus Math (No. A-109)
3. Addition Logician (No. A-125)
4. Space Subtraction (No. A-145)
5. Subtraction Puzzles (No. A-146)
6. Multiplication Puzzles (No. A-147)
7. Quotient Quest (No. A-148)

### Mastering Math Series Utility Diskettes

The Management System, Diagnostic System, and Worksheet Generator can be used independently of each other. In the following suggestions, they are treated in an integrated manner; however, they do not need to be used in this way.

- Diagnostic System

The Diagnostic System is designed to help place students in the Mastering Math series. Each of the four operations—addition, subtraction, multiplication, and division—is covered by testing selected objectives. Objectives covered for each operation are shown on the Mastering Math Series Objective charts found on pages 13-30. The teacher defines mastery and specifies the number of problems presented for each objective. Students are tested according to these specifications. The results are recorded for teacher reference.

The results suggest that the student begin with a particular lesson in the series. The teacher can enter this information into the Management System or can simply provide the indicated lesson diskette and tell the student which lesson to start with.



## USE IN AN INSTRUCTIONAL SETTING (continued)

- Management System

Using the information gained by testing students with the Diagnostic System, the teacher can place students on the Management System. The operation and level of entry for that operation is then managed by the Management System for each student in the group.

The teacher can also place students on the Management System without use of the Diagnostic System by knowing the skill level of each student and referring to the Mastering Math Series Objectives charts found on pages 13-30.

- The Worksheet Generator

Using the information gained by testing students through the Diagnostic System and/or information on achievement recorded by the Management System, teachers can provide paper-and-pencil practice on math skill objectives. The Worksheet Generator is an easy-to-use, flexible means of producing worksheets based on the objectives from the Mastering Math series.

## USING THE WORKSHEET GENERATOR

### Overview

The Worksheet Generator allows you to easily produce worksheets to supplement the lessons contained in the Mastering Math series. Worksheets can be produced by either specifying objective numbers for an operation or by simply indicating a program name. This option allows you both flexibility and convenience in designing a worksheet. The examples below illustrate these advantages.

Example 1: You want an addition worksheet that has problems with two 2-digit addends resulting in a sum greater than 100. By reviewing the addition objectives, you note that objective WA24 on page 16 will generate this type of problem.

Example 2: Some students have been having trouble with the MAGIC CARPET program on the Subtraction Puzzles diskette. By simply indicating this program name, you can generate a worksheet with those problem types and give it to the students. Inspecting their work will help in diagnosing their problems.

Example 3: You would like a worksheet covering all the objectives included on the Circus Math diskette. Since the last program on each diskette is a review program, just select a worksheet based on the review program ELEPHANT WALK.

These are only a few examples of selecting problems for a worksheet, but they illustrate how you can go from very specific types of problems to general types.

Additional features of the Worksheet Generator are covered in the following sections (DESIGN A WORKSHEET and PRINT A WORKSHEET).

### Getting Started

1. Run the Printer Support option found on the main menu (if necessary). Consult Appendix B to determine the need to use this option.
2. Design and print your worksheet(s) by running the DESIGN A WORKSHEET program.
3. If you previously designed a worksheet and saved the format, you can print it by running the PRINT A WORKSHEET program.
4. A printer is required in order to print worksheets. However, worksheets can be designed and the formats saved on computers without printers attached. When a printer is then available, just run the PRINT A WORKSHEET option.

**DESCRIPTION**

This program allows you to design and print worksheets for your students. A name list can also be entered to produce personalized worksheets. The design format of your worksheet and name list can be saved for future use. Briefly, the steps in producing a worksheet are:

1. Indicate the problem types
  - a) Select the operation (+, -, x, or ÷)
  - b) By objective number(s) or program name
  - c) Number of problems (up to 40)
  - d) Problem distribution (if by objective numbers)
2. Format the worksheet
  - a) Title, name blank, and problem numbering
  - b) Number of copies (up to 24)
  - c) Personalize worksheets (optional)
3. Save your worksheet design (optional)
4. Print your worksheet

**Step 1: Indicate the Problem Types**

The first step is choosing the operation for the worksheet (Figure 1). Operations cannot be mixed when generating worksheets. You must then decide whether the worksheet will be based on specific objectives you have picked, or on a particular program found on a lesson diskette (Figure 2). In either case, you can refer to the objective lists found on pages 13-30 of this manual.

**Design a Worksheet**

---

**Operations available:**

1. Addition
2. Subtraction
3. Multiplication
4. Division

**Which number? 1☐**

Figure 1

**Design a Worksheet**

---

**The problem types can be selected by specifying:**

1. objective numbers
2. a program name

**Which number? 1☐**

Figure 2

## DESIGN A WORKSHEET

### Indicate the Problem Types (continued)

If you have decided to specify objective numbers, you will be asked to enter the objective numbers (Figure 3). Some objectives in the range indicated are not available because they are usually taught at a higher grade level. The worksheet can contain between 15 and 40 problems. The problems can be equally divided among the selected objectives, or you may distribute them yourself (Figure 4).

**Design a Worksheet**

The available addition objectives are WA1 - WA34. Consult your manual for descriptions of each objective.

1 2 3 4 7

Enter objective number or range of objectives (example: WA1-13).

Objective number(s): WA11-14

(Press RETURN if done)

Figure 3

**Design a Worksheet**

Enter number of problems per objective:

WA1 -> 4  
WA2 -> 4  
WA3 -> 6  
WA4 -> 6  
WA7 -> 3  
WA11-> 8  
WA12->  
WA13->  
WA14->

Problems left: 17

Figure 4

If you chose to specify a program name, you will be given a list of programs for the operation. Since addition and subtraction have more than one lesson diskette, you must first specify the proper diskette (Figure 5). A menu of programs is then displayed (Figure 6). The objectives covered by each program and their frequency can be found starting on page 13.

**Design a Worksheet**

The problems can be from:

1. Early Addition
2. Circus Math
3. Addition Logician

Which number? 3

Figure 5

**Design a Worksheet**

Addition Logician programs:

1. Three in a Row
2. Zebug Nin
3. The Fence Game
4. Repeat After Me
5. Race Time (Review)

Which number? 4

Figure 6

# DESIGN A WORKSHEET

## Indicate the Problem Types (continued)

Special consideration must be given whenever you specify division problems using objectives WD1 - WD6 (Figure 7). This includes some of the problems found in the programs MAGIC FLAGS, AFRICAN SAFARI, CASTLE CAPER, and PEARL DIVERS found on the Quotient Quest diskette. Since you may prefer to not use the fractional notation for division, you can select from the four formats shown. The formats selected can also be mixed (Figure 8). However, notice that you must insert the  $\div$  symbol. This is because it is not a standard character on most printers.

**Design a Worksheet**

---

Division problems involving objectives WD1-WD6 have been selected. These problems can be printed in different formats. The formats are:

1.  $35/7 =$

3.  $7 \overline{)35}$

2.  $\frac{35}{7} =$

4.  $35 \div 7 =$

(Note: The  $\div$  symbol cannot be produced by most printers. Therefore, a blank is provided for you to fill in the  $\div$  symbol.)

Press SPACE BAR to continue

Figure 7

**Design a Worksheet**

---

Division formats:

1.  $35/7 =$

3.  $7 \overline{)35}$

2.  $\frac{35}{7} =$

4.  $35 \div 7 =$

(You must insert the  $\div$  symbol)

Enter the format(s) you want (one at a time): 4

(Press RETURN if done)

Figure 8

## Step 2: Formatting the Worksheet

Now that you have indicated the type and number of problems, you can format the worksheet to meet your needs (Figure 9). The title can be changed by selecting Option 1 (Figure 10). The title can be omitted by pressing the Return Key for the title when Option 1 is selected.

**Design a Worksheet**

---

1. Title:	Division Worksheet
2. Print line for name?	Yes
3. Print problems numbers?	Yes
4. Number of copies:	1
5. Print answer key(s)?	No
6. Personalize worksheets?	No

---

Enter option number to change: 1

(Press RETURN if done)

Figure 9

**Design a Worksheet**

---

1. Title:	Division Worksheet
2. Print line for name?	Yes
3. Print problems numbers?	Yes
4. Number of copies:	1
5. Print answer key(s)?	No
6. Personalize worksheets?	No

---

Title: Division Quiz 4-B

Figure 10

## DESIGN A WORKSHEET

### Formatting the Worksheet (continued)

Options 2, 3, and 5 provide control over printing of the name line, the problem numbers, and answer keys (Figure 11). Compare the sample worksheets on pages 31-34 to see how they are used. Option 4 allows you to regulate the number of worksheets printed (Figure 12). You can print up to 24 worksheets that are either all the same, or all different.

**Design a Worksheet**

---

1. Title:	Division Quiz 4-B
2. Print line for name?	Yes
3. Print problems numbers?	No
4. Number of copies:	1
5. Print answer key(s)?	No
6. Personalize worksheets?	No

---

Enter option number to change: 5~~␣~~  
(Press RETURN if done)

Figure 11

**Design a Worksheet**

---

1. Title:	Division Quiz 4-B
2. Print line for name?	Yes
3. Print problems numbers?	No
4. Number of copies:	1
5. Print answer key(s)?	Yes
6. Personalize worksheets?	No

---

How many copies (1-24)? 12~~␣~~  
Do you want all copies the same? no~~␣~~

Figure 12

Worksheets can be personalized with student names by selecting a name list already saved (Figure 13), or by entering your own name list (Figure 14). After entering a new name list, you are given the option of saving it for future use. A maximum of 10 name lists, each containing up to 24 names, can be saved on your diskette.

**Design a Worksheet**

---

Name lists saved:

1. Class 4-B
2. Class 4-C
3. Red Group
4. Mr. Oakes Class
5. Blue Group
6.
7.
8.
9.
10.

Do you want to use one of the above name lists? yes~~␣~~  
Which name list (1-5)? 3~~␣~~

Figure 13

**Design a Worksheet**

---

1. Aadland, Pat	7. Monson, Jon
2. Caruso, Chad	8. Nolte, Tin
3. Dennison, Terry	9.
4. Garvin, Steve	10.
5. Garvin, Sue	11.
6. Hanks, Brad	12.

---

Last name: Pantzke~~␣~~  
First name: Kurt~~␣~~

Figure 14

## DESIGN A WORKSHEET

### Step 3: Saving Your Worksheet Design

After you have completed the design of your worksheet, you are given the option of saving the format for future use (Figure 15). If you choose to save your design, enter a name for your worksheet (Figure 16). To access this design later, run the PRINT A WORKSHEET program (see page 11). A maximum of 20 worksheet designs can be saved on your diskette.

**Design a Worksheet**

---

1. Title: Division Quiz 4-B

2. Print line for name? Yes

3. Print problems numbers? No

4. Number of copies: (all different) 12

5. Print answer key(s)? Yes

6. Personalize worksheets? Yes

---

Do you want to save the format of this worksheet for future use? yes

Figure 15

**Design a Worksheet**

---

1. Div. Quiz 4-B	11.
2. Subt. Facts	12.
3. Division WS-1	13.
4. Division WS-2	14.
5. Division WS-3	15.
6. Magic Carpet	16.
7.	17.
8.	18.
9.	19.
10.	20.

---

Enter a name for the worksheet that you have designed: Div. Quiz 4-B2

Figure 16

### Step 4: Printing Your Worksheet(s)

You are now ready to print your worksheet(s). Be sure your printer is ready and the paper properly positioned. The pause between each row of problems printed is normal. It is caused by the computer calculating the next row of problems.

## DESCRIPTION

This program allows you to print a worksheet that was previously designed and saved. A few modifications are possible before printing. However, this program does not allow you to save designs or name lists for future use.

## USING THE PROGRAM

The first step is to select the worksheet you want to print (Figure 1). The type and number of problems is then shown (Figure 2). If it is not the correct worksheet, you are returned to the main list to select another.

**Print a Worksheet**

---

1. Div. Quiz 4-B	11.
2. Subt. Facts	12.
3. Division WS-1	13.
4. Division WS-2	14.
5. Division WS-3	15.
6. Magic Carpet	16.
7.	17.
8.	18.
9.	19.
10.	20.

---

Which worksheet? 4

Figure 1

**Print a Worksheet**

---

Operation: Division

Problems: 30

Based on: WD 1, 2, 3, 4, 5

Is this the right worksheet? yes

Figure 2

At this point, you can modify the format of the worksheet or personalize the worksheet by adjusting the options shown in Figure 3. These are the same options used in the DESIGN A WORKSHEET program. (See pages 8-9 for a description of these options.)

**Print a Worksheet**

---

1. Title:	Division Worksheet 2
2. Print line for name?	Yes
3. Print problems numbers?	Yes
4. Number of copies: (all different)	12
5. Print answer key(s)?	No
6. Personalize worksheets?	No

---

Enter option number to change:

(Press RETURN if done)

Figure 3



## DELETE DESIGNS OR NAMES

### USING THE PROGRAM

This utility program is provided for deleting any of the worksheet designs or name lists that were previously saved (Figure 1). If you choose to delete worksheet designs, a list of saved designs is displayed (Figure 2). You may select any number of designs to delete. If you make a mistake when selecting, simply enter the number again in order to undo your selection.

```

Delete Designs or Names
-----
Options:
  1. Delete worksheet designs
  2. Delete name lists
  3. Return to main menu
Which number? 1

```

Figure 1

```

Delete Designs or Names
-----
1. Div. Quiz 4-B      11.
2. Subt. Facts        12.
3. Division WS-1      13.
4. Division WS-2      14.
5. Division WS-3      15.
6. Magic Carpet       16.
7.                    17.
8.                    18.
9.                    19.
10.                   20.
-----
Enter the numbers (one at a time) of
the worksheet designs you want
to delete: 2

```

(Press RETURN if done)

Figure 2

If you choose to delete name lists, the saved name lists are first displayed (Figure 3). You may select any number of name lists to delete.

```

Delete Designs or Names
-----
Name lists saved:
  1. Class 4-B
  2. Class 4-C
  3. Red Group
  4. Mr. Oakes Class
  5. Blue Group
  6.
  7.
  8.
  9.
 10.
Enter the numbers (one at a time) of the
name lists you want deleted: 3

```

(Press RETURN if done)

Figure 3

## MASTERING MATH SERIES OBJECTIVES

The objectives used in the Mastering Math series include the basic operations (+, -, x, and ÷) presented in approximately grades 1-4. The scope and sequence of these objectives was based on the Compute programs developed by the Minneapolis Public Schools under a grant from the Minnesota Council on Quality Education.

Each objective is numbered and coded with a prefix. (For example, WA17.) The prefixes used are:

WA = Whole-number Addition  
WS = Whole-number Subtraction  
WM = Whole-number Multiplication  
WD = Whole-number Division

The seven lesson diskettes in the Mastering Math series contain 38 programs. These 38 programs are based on combinations of 81 different objectives. The chart below summarizes this information.

Lesson Diskette	Operation	Programs	Objectives
1. Early Addition	+	6	WA1 - WA8
2. Circus Math	+	5	WA9 - WA22
3. Addition Logician	+	5	WA23 - WA34
4. Space Subtraction	-	5	WS1 - WS10
5. Subtraction Puzzles	-	5	WS11 - WS18
6. Multiplication Puzzles	x	6	WM1 - WM20
7. Quotient Quest	÷	6	WD1 - WD21

The following pages (14-30) describe each objective and program in the series.

## A D D I T I O N   O B J E C T I V E S

The Mastering Math series contains three addition diskettes that are based on the whole-numbers addition objectives WA1 - WA34. The diskettes are:

<u>Diskettes</u>	<u>Objectives</u>
Early Addition	WA1 - WA8
Circus Math	WA9 - WA22
Addition Logician	WA23 - WA34

The chart that follows, describes each of the whole-number addition objectives.

<u>Objective Number</u>	<u>Description</u>	<u>Sample Problem(s)</u>	
WA1	Facts; sum $\leq 10$	$\begin{array}{r} 4 \\ + 3 \\ \hline \end{array}$	$5 + 5 = \underline{\quad}$
WA2	Fill in missing addend; sum $\leq 10$ ; facts	$\underline{\quad} + 2 = 10$	$3 + \underline{\quad} = 7$
WA3	Zero plus a 1-digit number	$0 + 7 = \underline{\quad}$	$\begin{array}{r} 1 \\ + 0 \\ \hline \end{array}$
WA4	Fill in missing addend; one of the addends is zero	$\underline{\quad} + 4 = 4$	$0 + \underline{\quad} = 7$
WA5	Facts; sum between 11 and 18	$\begin{array}{r} 9 \\ + 8 \\ \hline \end{array}$	$9 + 4 = \underline{\quad}$
WA6	Facts; fill in missing addend; sum between 11 and 18	$\underline{\quad} + 1 = 16$	$4 + \underline{\quad} = 11$
WA7	Zero plus a 2-digit addend	$\begin{array}{r} 76 \\ + 0 \\ \hline \end{array}$	$16 + 0 = \underline{\quad}$
WA8	Three addends; sum $\geq 10$	$\begin{array}{r} 6 \\ 1 \\ + 5 \\ \hline \end{array}$	

# A D D I T I O N   O B J E C T I V E S

<u>Objective Number (cont.)</u>	<u>Description</u>	<u>Sample Problem(s)</u>	
WA9	Three addends; sum > 10	$\begin{array}{r} 6 \\ 5 \\ + 8 \\ \hline \end{array}$	
WA10	(Not used)		
WA11	A 1-digit addend plus a multiple of 10	$\begin{array}{r} 4 \\ + 30 \\ \hline \end{array}$	5 + 80 = _____
WA12	Two addends; multiples of 10, 100, or 1000	$\begin{array}{r} 3000 \\ + 400 \\ \hline \end{array}$	
WA13	Two 2-digit addends; no regrouping; sum < 100	$\begin{array}{r} 51 \\ + 33 \\ \hline \end{array}$	
WA14	Three 2-digit addends; no regrouping; sum < 100	$\begin{array}{r} 35 \\ 21 \\ + 12 \\ \hline \end{array}$	
WA15	Two 3-digit addends; no regrouping; sum < 1000	$\begin{array}{r} 527 \\ + 421 \\ \hline \end{array}$	
WA16	A 1-digit addend plus a 3- or 4-digit addend; no regrouping	$\begin{array}{r} 4192 \\ + 5 \\ \hline \end{array}$	
WA17	A 2-digit addend plus a 3- or 4-digit addend; no regrouping	$\begin{array}{r} 831 \\ + 34 \\ \hline \end{array}$	
WA18	Addends both multiples of 10	$\begin{array}{r} 30 \\ + 50 \\ \hline \end{array}$	20 + 40 = _____
WA19	Addends both multiples of 100 or 1000	$\begin{array}{r} 300 \\ + 500 \\ \hline \end{array}$	6000 + 3000 = _____

# A D D I T I O N   O B J E C T I V E S

<u>Objective Number (cont.)</u>	<u>Description</u>	<u>Sample Problem(s)</u>
WA20	Two 2-digit addends; sum > 100	$\begin{array}{r} 94 \\ + 63 \\ \hline \end{array}$
WA21	Three 2-digit addends; sum > 100	$\begin{array}{r} 21 \\ 46 \\ + 82 \\ \hline \end{array}$
WA22	Two 3-digit addends; sum > 1000	$\begin{array}{r} 836 \\ + 341 \\ \hline \end{array}$
WA23	Two 2-digit addends; regrouping; sum < 100	$\begin{array}{r} 18 \\ + 25 \\ \hline \end{array}$
WA24	Two 2-digit addends; regrouping; sum > 100	$\begin{array}{r} 87 \\ + 65 \\ \hline \end{array}$
WA25	(Not used)	
WA26	A 1-digit addend plus a 3- or 4-digit addend; regrouping	$\begin{array}{r} 985 \\ + 6 \\ \hline \end{array}$
WA27	Three or four 2-digit addends; regroup 1 from units to tens place	$\begin{array}{r} 12 \\ 67 \\ + 56 \\ \hline \end{array}$
WA28	Four 2-digit addends; regroup 2 or more from units to tens place	$\begin{array}{r} 72 \\ 33 \\ 48 \\ + 29 \\ \hline \end{array}$
WA29	(Not used)	

# A D D I T I O N   O B J E C T I V E S

<u>Objective Number (cont.)</u>	<u>Description</u>	<u>Sample Problem(s)</u>
WA30	Two 3-digit addends; regroup from tens to hundreds place	$\begin{array}{r} 382 \\ + 474 \\ \hline \end{array}$
WA31	Two 4-digit addends; regroup from hundreds to thousands place	$\begin{array}{r} 1942 \\ + 2705 \\ \hline \end{array}$
WA32	A 3-digit addend plus a 4-digit addend; regroup from hundreds to thousands place	$\begin{array}{r} 2503 \\ + 545 \\ \hline \end{array}$
WA33	A 2-digit addend plus a 3- or 4-digit addend; regroup from units or tens place	$\begin{array}{r} 5690 \\ + 96 \\ \hline \end{array}$
WA34	Three or four 3-digit addends; regroup from units or tens place	$\begin{array}{r} 311 \\ 131 \\ 371 \\ + 574 \\ \hline \end{array}$

## **A D D I T I O N   O B J E C T I V E S**

### **ADDITION PROGRAMS**

Each addition program has problems based on some combination of objectives from the preceding list. The objective numbers and their frequencies are given here. If you generate a worksheet by selecting a program name, the percentages shown in parenthesis will be applied. (For example, if you generate a worksheet with 40 problems for SURPRISE PACKAGE, 38 of the problems (95%) will be of the WA1 type and 2 of the problems (5%) will be of the WA3 type.) The level number following each program name refers to the approximate grade level.

### **EARLY ADDITION DISKETTE**

#### **1. SURPRISE PACKAGE (Level 1)**

WA1 (95%)	WA3 (5%)
-----------	----------

#### **2. BUILD AN AIRPLANE (Level 1)**

WA1 (40%)	WA2 (50%)	WA3 (5%)	WA4 (5%)
-----------	-----------	----------	----------

#### **3. BALLOON SHOOT (Level 1)**

WA1 (20%)	WA2 (40%)	WA3 (5%)	WA4 (5%)
WA8 (30%)			

#### **4. CREATE A CREATURE (Level 2)**

WA5 (80%)	WA6 (20%)
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#### **5. FIRE FIGHTERS (Level 2)**

WA5 (10%)	WA6 (30%)	WA8 (60%)
-----------	-----------	-----------

#### **6. FROG RACE (Level 2)**

WA1 (10%)	WA2 (10%)	WA3 (10%)	WA4 (10%)
WA5 (10%)	WA6 (10%)	WA7 (30%)	WA8 (10%)

## A D D I T I O N   O B J E C T I V E S

### CIRCUS MATH DISKETTE

#### 1. CLOWN MAKER (Level 2)

WA11 (20%)	WA13 (80%)
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#### 2. CLOWN CAR (Level 2)

WA11 (5%)	WA13 (5%)	WA14 (90%)
-----------	-----------	------------

#### 3. HIGH WIRE (Level 2)

WA14 (40%)	WA16 (60%)
------------	------------

#### 4. CANNON SHOOT (Level 3)

WA9 (16%)	WA11 (8%)	WA12 (4%)	WA13 (8%)
WA14 (8%)	WA15 (8%)	WA16 (8%)	WA17 (8%)
WA18 (4%)	WA19 (4%)	WA20 (8%)	WA21 (8%)
WA22 (8%)			

#### 5. ELEPHANT WALK (Levels 2 and 3)

WA9 (8%)	WA11 (8%)	WA12 (8%)	WA13 (8%)
WA14 (8%)	WA15 (8%)	WA16 (8%)	WA17 (8%)
WA18 (8%)	WA19 (8%)	WA20 (8%)	WA21 (8%)
WA22 (8%)			



## A D D I T I O N   O B J E C T I V E S

### ADDITION LOGICIAN DISKETTE

#### 1. THREE IN A ROW (Level 3)

WA23 (60%)	WA26 (40%)
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#### 2. ZEBUG NIM (Level 3)

WA24 (50%)	WA27 (50%)
------------	------------

#### 3. THE FENCE GAME (Level 3)

WA28 (100%)
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#### 4. REPEAT AFTER ME (Level 3)

WA30 (20%)	WA31 (20%)	WA32 (20%)	WA33 (20%)
WA34 (20%)			

#### 5. RACE TIME (Level 3)

WA23 (10%)	WA24 (10%)	WA26 (10%)	WA27 (10%)
WA28 (10%)	WA30 (10%)	WA31 (10%)	WA32 (10%)
WA33 (10%)	WA34 (10%)		

## SUBTRACTION OBJECTIVES

The Mastering Math series contains two subtraction diskettes that are based on whole-number subtraction objectives WS1 - WS18. The diskettes are:

<u>Diskettes</u>	<u>Objectives</u>
Space Subtraction	WS1 - WS10
Subtraction Puzzles	WS11 - WS18

The chart that follows describes each of the whole-number subtraction objectives.

<u>Objective Number</u>	<u>Description</u>	<u>Sample Problem(s)</u>
WS1	Facts; a 1-digit number from a 1-digit number	$\begin{array}{r} 7 \\ - 5 \\ \hline \end{array}$ $8 - 4 = \underline{\quad}$
WS2	Facts; a 1-digit number from a 2-digit number	$\begin{array}{r} 12 \\ - 6 \\ \hline \end{array}$ $13 - 5 = \underline{\quad}$
WS3	A 1-digit number from itself; answer always zero	$\begin{array}{r} 4 \\ - 4 \\ \hline \end{array}$ $9 - 9 = \underline{\quad}$
WS4	Zero from a 1-digit number	$\begin{array}{r} 7 \\ - 0 \\ \hline \end{array}$ $5 - 0 = \underline{\quad}$
WS5	Zero from a 2-digit number $\leq 18$	$\begin{array}{r} 15 \\ - 0 \\ \hline \end{array}$ $12 - 0 = \underline{\quad}$
WS6	A 2-digit multiple of 10 from a 2-digit multiple of 10	$\begin{array}{r} 80 \\ - 30 \\ \hline \end{array}$
WS7	A 1-digit number from a 2-digit number; horizontal; no regrouping	$96 - 2 = \underline{\quad}$
WS8	A 2-digit number from a 2-digit number; no regrouping	$\begin{array}{r} 46 \\ - 15 \\ \hline \end{array}$

# SUBTRACTION OBJECTIVES

<u>Objective Number (cont.)</u>	<u>Description</u>	<u>Sample Problem</u>
WS9	A 3-digit multiple of 100 from a 3-digit multiple of 100	$\begin{array}{r} 900 \\ - 300 \\ \hline \end{array}$
WS10	A 3-digit number from a 3-digit number; no regrouping	$\begin{array}{r} 866 \\ - 835 \\ \hline \end{array}$
WS11	A 1-digit number from a 2-digit number; regrouping	$\begin{array}{r} 43 \\ - 7 \\ \hline \end{array}$
WS12	A 1-digit number from a 2-digit multiple of 10; regrouping	$\begin{array}{r} 80 \\ - 5 \\ \hline \end{array}$
WS13	A 2-digit number from a 2-digit number; regrouping	$\begin{array}{r} 57 \\ - 39 \\ \hline \end{array}$
WS14	A 2-digit number from a 2-digit multiple of 10; regrouping	$\begin{array}{r} 40 \\ - 32 \\ \hline \end{array}$
WS15	(Not used)	
WS16	A 3-digit number from a 3-digit number; regroup to units place only	$\begin{array}{r} 567 \\ - 428 \\ \hline \end{array}$
WS17	A 3-digit number from a 3-digit number; regroup to tens place only	$\begin{array}{r} 358 \\ - 264 \\ \hline \end{array}$
WS18	A 2-digit number from a 3-digit number; regroup to tens place only	$\begin{array}{r} 215 \\ - 22 \\ \hline \end{array}$

## SUBTRACTION OBJECTIVES

### SUBTRACTION PROGRAMS

Each subtraction program has problems based on some combination of objectives from the preceding list. The objective numbers and their frequencies are given here. If you generate a worksheet by selecting a program name, the percentages shown in parenthesis will be applied. (For example, if you generate a worksheet with 40 problems for COSMIC CREATURE, 34 problems (84%) will be of the WS1 type, 3 problems (8%) of the WS3 type, and 3 problems (8%) of WS4 type.) The level number following each program name refers to the approximate grade level.

### SPACE SUBTRACTION DISKETTE

#### 1. COSMIC CREATURE (Level 1)

WS1 (84%)	WS3 (8%)	WS4 (8%)
-----------	----------	----------

#### 2. BLAST OFF (Level 2)

WS2 (88%)	WS5 (12%)
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#### 3. ZEMOON WALK (Level 2)

WS6 (12%)	WS7 (44%)	WS8 (44%)
-----------	-----------	-----------

#### 4. SPACE MATCH (Level 3)

WS6 (10%)	WS7 (20%)	WS8 (20%)	WS9 (20%)
WS10 (30%)			

#### 5. SHUTTLE TRIP (Levels 1 - 3)

WS1 (10%)	WS2 (10%)	WS3 (10%)	WS4 (10%)
WS5 (10%)	WS6 (10%)	WS7 (10%)	WS8 (10%)
WS9 (10%)	WS10 (10%)		

# SUBTRACTION OBJECTIVES

## SUBTRACTION PUZZLES DISKETTE

### 1. NAME THAT CREATURE (Level 3)

WS11 (50%)	WS12 (50%)
------------	------------

### 2. SPACE PEGS (Level 3)

WS13 (50%)	WS14 (50%)
------------	------------

### 3. TRACE (Level 3)

WS13 (25%)	WS14 (25%)	WS16 (50%)
------------	------------	------------

### 4. MAGIC CARPET (Level 3)

WS17 (50%)	WS18 (50%)
------------	------------

### 5. BALLOON TRIP (Level 3)

WS11 (15%)	WS12 (10%)	WS13 (15%)	WS14 (15%)
WS16 (15%)	WS17 (15%)	WS18 (15%)	

## M U L T I P L I C A T I O N   O B J E C T I V E S

The Mastering Math series contains one diskette, Multiplication Puzzles, that is based on whole-number multiplication objectives WM1 - WM20. The chart below describes each of these objectives.

<u>Objective Number</u>	<u>Description</u>	<u>Sample Problem(s)</u>
WM1	Facts; factors from 2 to 5	$2 \times 5 = \underline{\quad}$
WM2	Facts; at least one factor $\geq 6$	$9 \times 3 = \underline{\quad}$
WM3	Missing factor; factors from 2 to 5	$4 \times \underline{\quad} = 20$
WM4	Missing factor; at least one factor $\geq 6$	$7 \times \underline{\quad} = 21$
WM5	One times a 1-digit number	$1 \times 6 = \underline{\quad}$
WM6	One times a 2-digit number	$24 \times 1 = \underline{\quad}$ $\begin{array}{r} 19 \\ \times 1 \\ \hline \end{array}$
WM7	Zero times a 1-digit number	$4 \times 0 = \underline{\quad}$ $\begin{array}{r} 7 \\ \times 0 \\ \hline \end{array}$
WM8	Zero times a 2-digit number	$0 \times 15 = \underline{\quad}$ $\begin{array}{r} 83 \\ \times 0 \\ \hline \end{array}$
WM9	Ten times a 1-digit number	$6 \times 10 = \underline{\quad}$ $\begin{array}{r} 10 \\ \times 7 \\ \hline \end{array}$
WM10	Multiple of 10 times a 1-digit number	$20 \times 3 = \underline{\quad}$ $\begin{array}{r} 90 \\ \times 6 \\ \hline \end{array}$

# M U L T I P L I C A T I O N   O B J E C T I V E S

<u>Objective Number (cont.)</u>	<u>Description</u>	<u>Sample Problem(s)</u>
WM11	Multiple of 100 times a 1-digit number	$400 \times 7 = \underline{\quad}$ $\begin{array}{r} 900 \\ \times 3 \\ \hline \end{array}$
WM12	A 1-digit number times a 2- or 3-digit number; no regrouping	$\begin{array}{r} 21 \\ \times 4 \\ \hline \end{array}$
WM13 - 16	(Not used)	
WM17	A 1-digit number times a 2-digit number; regrouping	$\begin{array}{r} 26 \\ \times 9 \\ \hline \end{array}$
WM18	A 1-digit number times a 3-digit number; regroup to zero	$\begin{array}{r} 905 \\ \times 2 \\ \hline \end{array}$
WM19	A one-digit number times a three-digit number; regroup to tens place	$\begin{array}{r} 317 \\ \times 4 \\ \hline \end{array}$
WM20	A one-digit number times a three-digit number; regroup to hundreds place	$\begin{array}{r} 180 \\ \times 5 \\ \hline \end{array}$

## M U L T I P L I C A T I O N   O B J E C T I V E S

### MULTIPLICATION PROGRAMS

Each multiplication program has problems based on some combination of objectives from the preceding list. The objective numbers and their frequencies are given below. If you generate a worksheet by selecting a program name, the percentages shown in parenthesis will be applied. (For example, if you generate a worksheet with 40 problems for PAPER, ROCK, SCISSORS, 8 of the problems (20%) will be of the WM1 type and 32 of the problems (80%) will be of the WM2 type.) The level number following each program name refers to the approximate grade level.

### MULTIPLICATION PUZZLES DISKETTE

#### 1. LIGHTS OUT (Level 3)

WM1 (80%)	WM5 (12%)	WM7 (8%)
-----------	-----------	----------

#### 2. PAPER, ROCK, SCISSORS (Level 3)

WM1 (20%)	WM2 (80%)
-----------	-----------

#### 3. TIC-TAC-TOE (Level 3)

WM1 (8%)	WM2 (12%)	WM3 (40%)	WM4 (40%)
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#### 4. DESERT ISLAND (Level 4)

WM6 (16%)	WM8 (16%)	WM9 (16%)	WM10 (12%)
WM11 (12%)	WM12 (28%)		

#### 5. CARROT PATCH (Level 4)

WM17 (24%)	WM18 (24%)	WM19 (32%)	WM20 (20%)
------------	------------	------------	------------

#### 6. ZOO TRIP (Levels 3-4)

WM1 (16%)	WM2 (16%)	WM3 (8%)	WM4 (8%)
WM5 (4%)	WM6 (4%)	WM7 (4%)	WM8 (4%)
WM9 (4%)	WM10 (4%)	WM11 (4%)	WM12 (4%)
WM17 (4%)	WM18 (8%)	WM19 (4%)	WM20 (4%)



## D I V I S I O N   O B J E C T I V E S

The Mastering Math series contains one diskette, Quotient Quest, that is based on the whole-number division objectives WD1 - WD21. The chart below describes each of these objectives.

<u>Objective Number</u>	<u>Description</u>	<u>Sample Problem(s)</u>
WD1	Division by 1	$28 \div 1$ , $28/1$ , $\frac{28}{1}$
WD2	Division into 0	$0 \div 3$ , $0/3$ , $\frac{0}{3}$
WD3	A number divided by itself; 1-digit numbers	$4 \div 4$ , $4/4$ , $\frac{4}{4}$
WD4	A number divided by itself; 2-digit numbers	$28 \div 28$ , $28/28$ , $\frac{28}{28}$
WD5	Facts; divisors 2 to 5	$32 \div 4$ , $32/4$ , $\frac{32}{4}$
WD6	Facts; divisors 6 to 9	$49 \div 7$ , $49/7$ , $\frac{49}{7}$
WD7	Facts; divisors 2 to 5	$3 \overline{) 21}$
WD8	Facts; divisors 6 to 9	$8 \overline{) 64}$
WD9	Facts; divisors 2 to 5; with remainders	$5 \overline{) 28}$
WD10	Facts; divisors 6 to 9; with remainders	$7 \overline{) 61}$
WD11	Sight division; first digit of dividend is a multiple of the divisor; no remainders	$3 \overline{) 69}$

## D I V I S I O N   O B J E C T I V E S

<u>Objective Number (cont.)</u>	<u>Description</u>	<u>Sample Problem(s)</u>
WD12	Sight division; first two digits of dividend form a multiple of the divisor; no remainders	$8 \overline{) 328}$
WD13	(Not used)	
WD14	Sight division on first step; first digit of dividend is a multiple of the divisor; with remainders	$4 \overline{) 89}$
WD15	Sight division on first step; first two digits of dividend form a multiple of the divisor; with remainder	$6 \overline{) 249}$
WD16	(Not used)	
WD17	Sight division on first step; quotient ends in 0; with remainder	$6 \overline{) 365}$
WD18	(Not used)	
WD19	Sight division on all steps; first two digits of dividend form a multiple of the divisor; dividend and quotient end in 0; no remainder	$3 \overline{) 1260}$
WD20	(Not used)	
WD21	Sight division on all steps; each digit of dividend is a multiple of the divisor; 3-digit quotient; no remainder	$3 \overline{) 693}$

## DIVISION OBJECTIVES

### DIVISION PROGRAMS

Each division program has programs based on some combination of the objectives from the preceding list. The objective numbers and their frequencies are given below. If you generate a worksheet by selecting a program name, the percentages shown in parenthesis will be applied. (For example, if you generate a worksheet with 40 problems for TOTEM SWITCH, 20 of the problems (50%) will be of the WD9 type and 20 of the problems (50%) will be of the WD10 type.) The level number following each program name refers to the approximate grade level.

### QUOTIENT QUEST DISKETTE

#### 1. MAGIC FLAGS (Level 4)

WD1 (12%)	WD2 (12%)	WD3 (12%)	WD5 (32%)
WD7 (32%)			

#### 2. AFRICAN SAFARI (Level 4)

WD5 (8%)	WD6 (40%)	WD7 (12%)	WD8 (40%)
----------	-----------	-----------	-----------

#### 3. TOTEM SWITCH (Level 4)

WD9 (50%)	WD10 (50%)
-----------	------------

#### 4. CASTLE CAPER (Level 4)

WD4 (10%)	WD11 (30%)	WD12 (30%)	WD21 (30%)
-----------	------------	------------	------------

#### 5. ORIENTAL TOWER (Level 4)

WD14 (25%)	WD15 (25%)	WD17 (25%)	WD19 (25%)
------------	------------	------------	------------

#### 6. PEARL DIVERS (Level 4)

WD1 (4%)	WD2 (4%)	WD3 (4%)	WD4 (4%)
WD5 (8%)	WD6 (13%)	WD7 (13%)	WD8 (13%)
WD9 (4%)	WD10 (4%)	WD11 (4%)	WD12 (4%)
WD14 (4%)	WD15 (4%)	WD17 (4%)	WD19 (4%)
WD21 (4%)			

# SAMPLE WORKSHEETS

## SAMPLE 1

The addition worksheet below illustrates the use of the default title "Addition Worksheet" and the inclusion of a line for the student's name. The problems are numbered and based on objectives WA15 and WA22. A portion of the answer key is also shown.

Addition Worksheet					Name _____
1.    504 + 213 ---	2.    733 + 246 ---	3.    402 + 461 ---	4.    736 + 103 ---	5.    724 + 203 ---	
6.    676 + 323 ---	7.    548 + 150 ---	8.    871 + 126 ---	9.    617 + 172 ---	10.   157 + 841 ---	
11.   313 + 170 ---	12.   312 + 252 ---	13.   841 + 113 ---	14.   682 + 212 ---	15.   183 + 706 ---	
16.   743 + 106 ---	17.   272 + 106 ---	18.   672 + 304 ---	19.   770 + 915 ---	20.   685 + 902 ---	

Addition Worksheet					Name _____	Answer Key _____
1.    504 + 213 --- 717	2.    733 + 246 --- 979	3.    402 + 461 --- 863	4.    736 + 103 --- 839	5.    724 + 203 --- 927		
6.    676 + 323 --- 999	7.    548 + 150 --- 698	8.    871 + 126 --- 997	9.    617 + 172 --- 789	10.   157 + 841 --- 998		
11.   313 + 170 --- 483	12.   312 + 252 --- 564	13.   841 + 113 --- 954	14.   682 + 212 --- 894	15.   183 + 706 --- 889		
16.   743 + 106 --- 849	17.   272 + 106 --- 378	18.   672 + 304 --- 976	19.   770 + 915 --- 1685	20.   685 + 902 --- 1587		

# SAMPLE WORKSHEETS

## SAMPLE 2

The subtraction facts worksheet below was produced by selecting whole-number subtraction objectives WS1 - WS5. The problems were not numbered, the title was modified, and a blank line for the name was omitted.

Subtraction Facts				
$\begin{array}{r} 4 \\ - 4 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ - 8 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ - 1 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ - 1 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ - 1 \\ \hline \end{array}$
$\begin{array}{r} 14 \\ - 5 \\ \hline \end{array}$	$\begin{array}{r} 11 \\ - 7 \\ \hline \end{array}$	$\begin{array}{r} 15 \\ - 7 \\ \hline \end{array}$	$\begin{array}{r} 16 \\ - 8 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ - 7 \\ \hline \end{array}$
$\begin{array}{r} 7 \\ - 7 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ - 3 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ - 2 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ - 0 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ - 0 \\ \hline \end{array}$
$\begin{array}{r} 7 \\ - 0 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ - 0 \\ \hline \end{array}$	$\begin{array}{r} 16 \\ - 0 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ - 0 \\ \hline \end{array}$	$\begin{array}{r} 13 \\ - 0 \\ \hline \end{array}$
$\begin{array}{r} 17 \\ - 0 \\ \hline \end{array}$	$\begin{array}{r} 16 \\ - 0 \\ \hline \end{array}$	$\begin{array}{r} 14 \\ - 0 \\ \hline \end{array}$		
$5 - 4 = \underline{\quad}$	$2 - 1 = \underline{\quad}$	$4 - 3 = \underline{\quad}$		
$17 - 8 = \underline{\quad}$	$16 - 8 = \underline{\quad}$	$18 - 9 = \underline{\quad}$		
$13 - 5 = \underline{\quad}$	$2 - 2 = \underline{\quad}$	$8 - 8 = \underline{\quad}$		
$7 - 7 = \underline{\quad}$	$3 - 3 = \underline{\quad}$	$4 - 0 = \underline{\quad}$		
$3 - 0 = \underline{\quad}$	$8 - 0 = \underline{\quad}$	$7 - 0 = \underline{\quad}$		
$12 - 0 = \underline{\quad}$	$12 - 0 = \underline{\quad}$			

# SAMPLE WORKSHEETS

## SAMPLE 3

The multiplication worksheet below has been retitled and personalized with a student name. The problems are based on the CARROT PATCH program from the Multiplication Puzzles diskette.

Carrot Patch Problems					Name Terry Livingston				
1.	$\begin{array}{r} 32 \\ \times 7 \\ \hline \end{array}$	2.	$\begin{array}{r} 29 \\ \times 8 \\ \hline \end{array}$	3.	$\begin{array}{r} 64 \\ \times 9 \\ \hline \end{array}$	4.	$\begin{array}{r} 38 \\ \times 2 \\ \hline \end{array}$	5.	$\begin{array}{r} 28 \\ \times 3 \\ \hline \end{array}$
6.	$\begin{array}{r} 35 \\ \times 3 \\ \hline \end{array}$	7.	$\begin{array}{r} 37 \\ \times 9 \\ \hline \end{array}$	8.	$\begin{array}{r} 27 \\ \times 6 \\ \hline \end{array}$	9.	$\begin{array}{r} 79 \\ \times 6 \\ \hline \end{array}$	10.	$\begin{array}{r} 24 \\ \times 8 \\ \hline \end{array}$
11.	$\begin{array}{r} 903 \\ \times 9 \\ \hline \end{array}$	12.	$\begin{array}{r} 309 \\ \times 2 \\ \hline \end{array}$	13.	$\begin{array}{r} 402 \\ \times 9 \\ \hline \end{array}$	14.	$\begin{array}{r} 204 \\ \times 7 \\ \hline \end{array}$	15.	$\begin{array}{r} 708 \\ \times 3 \\ \hline \end{array}$
16.	$\begin{array}{r} 509 \\ \times 7 \\ \hline \end{array}$	17.	$\begin{array}{r} 207 \\ \times 6 \\ \hline \end{array}$	18.	$\begin{array}{r} 904 \\ \times 6 \\ \hline \end{array}$	19.	$\begin{array}{r} 106 \\ \times 9 \\ \hline \end{array}$	20.	$\begin{array}{r} 305 \\ \times 3 \\ \hline \end{array}$
21.	$\begin{array}{r} 816 \\ \times 3 \\ \hline \end{array}$	22.	$\begin{array}{r} 226 \\ \times 2 \\ \hline \end{array}$	23.	$\begin{array}{r} 736 \\ \times 2 \\ \hline \end{array}$	24.	$\begin{array}{r} 124 \\ \times 3 \\ \hline \end{array}$	25.	$\begin{array}{r} 816 \\ \times 2 \\ \hline \end{array}$
26.	$\begin{array}{r} 139 \\ \times 2 \\ \hline \end{array}$	27.	$\begin{array}{r} 116 \\ \times 5 \\ \hline \end{array}$	28.	$\begin{array}{r} 139 \\ \times 2 \\ \hline \end{array}$	29.	$\begin{array}{r} 314 \\ \times 5 \\ \hline \end{array}$	30.	$\begin{array}{r} 237 \\ \times 2 \\ \hline \end{array}$
31.	$\begin{array}{r} 324 \\ \times 4 \\ \hline \end{array}$	32.	$\begin{array}{r} 316 \\ \times 5 \\ \hline \end{array}$	33.	$\begin{array}{r} 143 \\ \times 3 \\ \hline \end{array}$	34.	$\begin{array}{r} 163 \\ \times 3 \\ \hline \end{array}$	35.	$\begin{array}{r} 163 \\ \times 2 \\ \hline \end{array}$

# SAMPLE WORKSHEETS

## SAMPLE 4

The division worksheet below was based on the PEARL DIVERS review program found on the Quotient Quest diskette. Notice that all of the various division problem formats were used. The teacher had to insert the - in some of the problems.

Division Review		Name _____	
1. $71 \div 1 = \underline{\hspace{2cm}}$	2. $19 \div 1 = \underline{\hspace{2cm}}$	3. $13 \div 1 = \underline{\hspace{2cm}}$	
4. $0 \div 9 = \underline{\hspace{2cm}}$	5. $0 \div 3 = \underline{\hspace{2cm}}$	6. $9 \div 9 = \underline{\hspace{2cm}}$	
7. $8/8 = \underline{\hspace{2cm}}$	8. $38/38 = \underline{\hspace{2cm}}$	9. $75/75 = \underline{\hspace{2cm}}$	
10. $14/2 = \underline{\hspace{2cm}}$	11. $15/3 = \underline{\hspace{2cm}}$	12. $32/4 = \underline{\hspace{2cm}}$	
13. $24/4 = \underline{\hspace{2cm}}$	14. $56/8 = \underline{\hspace{2cm}}$	15. $49/7 = \underline{\hspace{2cm}}$	
16. $\frac{16}{8} = \underline{\hspace{2cm}}$	17. $\frac{49}{7} = \underline{\hspace{2cm}}$	18. $\frac{24}{8} = \underline{\hspace{2cm}}$	
19. $\frac{24}{6} = \underline{\hspace{2cm}}$	20. $\frac{27}{3} = \underline{\hspace{2cm}}$	21. $\frac{18}{2} = \underline{\hspace{2cm}}$	
22. $\frac{32}{4} = \underline{\hspace{2cm}}$	23. $\frac{45}{5} = \underline{\hspace{2cm}}$	24. $\frac{16}{4} = \underline{\hspace{2cm}}$	
25. $4 \overline{) 16}$	26. $4 \overline{) 18}$	27. $6 \overline{) 54}$	28. $7 \overline{) 35}$
29. $9 \overline{) 72}$	30. $9 \overline{) 45}$	31. $7 \overline{) 28}$	32. $4 \overline{) 27}$
33. $4 \overline{) 15}$	34. $7 \overline{) 29}$	35. $6 \overline{) 126}$	36. $2 \overline{) 49}$
37. $6 \overline{) 427}$	38. $7 \overline{) 286}$	39. $9 \overline{) 6390}$	40. $4 \overline{) 848}$

## **APPENDICES**



## CREDITS

The Worksheet Generator for MECC's Mastering Math Series was produced by a MECC development team that included Craig Solomonson (Project Coordinator), Rich Childers, and Paul Wenker.

The Mastering Math Series was derived from the MECC timeshare program Arithmetic Drill and Practice, which was based on an earlier package called Compute. The Compute programs were developed by the Minneapolis Public Schools under a grant from the Minnesota Council on Quality Education.

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### TO THE READER:

The Minnesota Educational Computing Corporation has made every effort to ensure the instructional quality of this courseware package. Your comments—as user or reviewer—are valued and will be considered for inclusion in any future version of the product. Please address comments to:

MECC Courseware Development  
3490 Lexington Avenue North  
St. Paul, Minnesota 55126

## USING A PRINTER WITH THIS COURSEWARE

A printer is required or may be used with this product. To connect your printer to an Apple II, II Plus, or //e computer, you will need the appropriate printer card (called an interface card) inserted into a slot (usually slot number 1 or 2) in the computer. To connect an Apple //c computer, use the printer port on the back of the computer. (The Apple //c contains the equivalent of a serial interface card in slot 1.)

**This product is initially set to work with an Apple Parallel card, an Apple Serial card, or an Apple Communications card located in either slot 1 or slot 2. If you have this setup, you do not need to do anything further.**

If your printer uses a different setup than described above or if you need or want to enter special printing commands, you will need to use the "Printer Support" option contained on the diskette.

Depending on which MECC software you are using, you can select the "Printer Support" option from the main menu or from the Management Options menu. (The Management Options menu is accessed by pressing Control-A while viewing the main menu. To press Control-A, hold down the Control Key and press the letter A.) You will then see the Printer Support menu as shown in Figure 1.

**Option 1, "Check current printer settings," shows the current printer settings.**

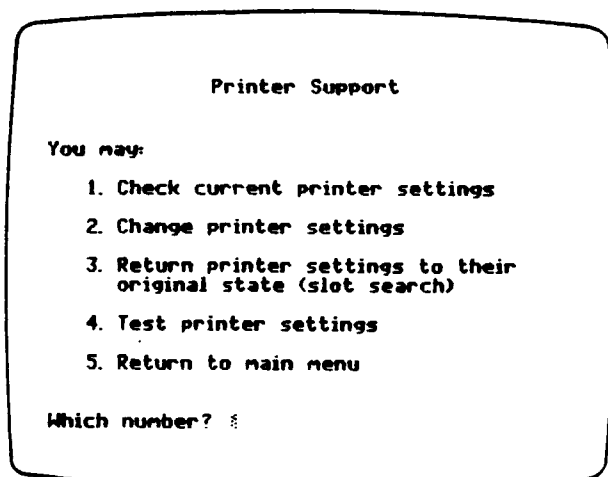


Figure 1

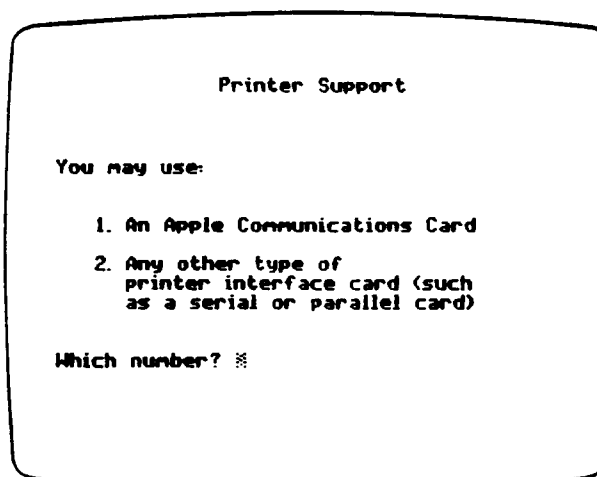


Figure 2

**Option 2, "Change printer settings," enables you to change the printer settings. To do this, you will first need to identify the type of printer card you are using (Figure 2). If you are using an Apple Communications card, specify the printer speed and the slot number. If you are using any other type of printer card, specify the slot number and whether your printer requires special commands.**

Special commands enable certain types of printers to operate and also permit special printing formats. These commands are listed in your manufacturer's printer or interface card manual. To illustrate, Figure 3 below shows the special command you could enter to produce compressed printing on an Apple Dot Matrix, Apple Imagewriter, or Apple Scribe printer. Figure 4 shows the special command you could enter to produce compressed printing on most Epson printers. Press the Return Key after entering a special command. The CHR\$(n) command will be translated into its corresponding character on the screen. You may then enter another command or simply press Return to end.

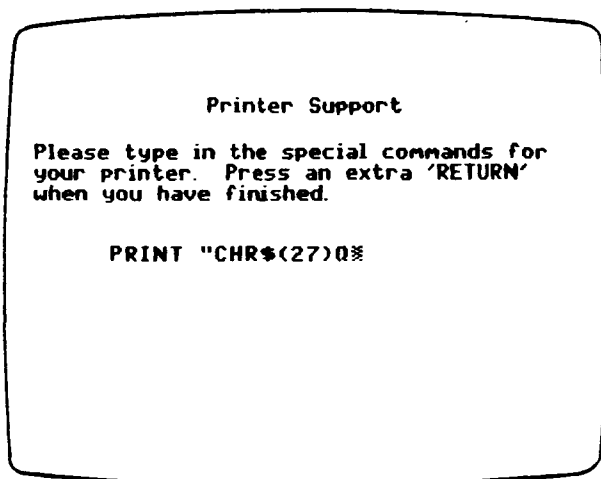


Figure 3

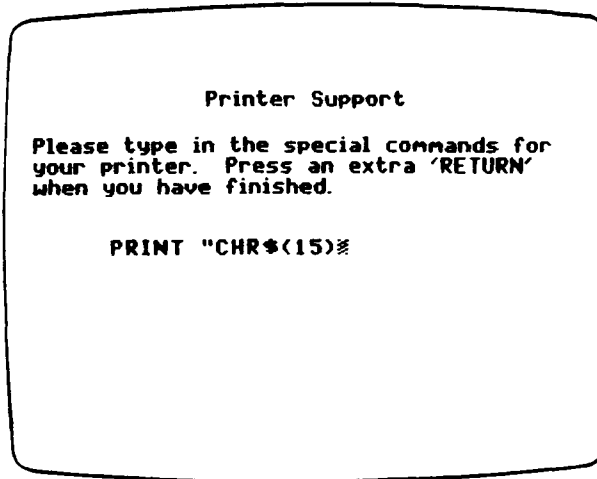


Figure 4

The chart below shows other frequently used special commands for the Apple Dot Matrix and Imagewriter printers.

Pica (10cpi) CHR\$(27)N	Elite (12cpi) CHR\$(27)E	Bold  CHR\$(27)!
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After you have made the necessary changes to the printer settings, you will be asked to specify the type of printer you are using. This information will be displayed when Option 1, "Check current printer settings," is selected.

**Option 3**, "Return printer settings to their original state (slot search)," tells the program to search slots 1 and 2 for a printer card and that no special commands will be used.

**Option 4**, "Test printer settings," prints out all the keyboard characters. If these characters do not appear, check to see whether you have connected your printer correctly or check your printer or interface card manual for special commands.

**Note:** Once the new printer settings have been established, the standard slot-searching routine will not be used. Instead, the computer will use the slot and any special commands you have specified.

The commands are saved on the diskette and are permanent until you use the "Printer Support" option again to change the printer settings.

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- **Help Line**

If you have any problems using MECC software:

- 1) make note of the name and version number of the product;
- 2) note the brand and model of the equipment involved, as well as the type of printer card used if the problem concerns a printer;
- 3) write or call the Help Line to describe the problem (612/481-3660).

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